UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/977,685	10/16/2001	Tomomasa Ohsumi	07481.0019	3847

7590 10/14/2004

Finnegan, Henderskon, Fárabow,
Garrett & Dunner, L.L.P.
1300 I Street, N.W.
Washington, DC 20005-3315

EXAMINER	
MCAVOY, ELLEN M	

ART UNIT	PAPER NUMBER
1764	

DATE MAILED: 10/14/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/977,685	OHSUMI ET AL.	
	Examiner	Art Unit	
	Ellen M McAvoy	1764	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *27 July 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-3* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-3* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-3 are still rejected under 35 U.S.C. 103(a) as being unpatentable over Tolfa et al (6,267,907), Tazaki (6,306,803) and Fahl et al (WO 98/50499), considered separately.

Applicants' arguments filed 27 July have been fully considered but they are not persuasive. As previously set forth, Tolfa et al ["Tolfa"] discloses a lubricant-refrigerant composition for a compression refrigeration system which comprises (A) a carbon dioxide refrigerant, and (B) a lubricant of an aliphatic naphthalene. Tolfa teaches that a supplemental lubricant such as a polyalkylene glycol may also be present. The examiner maintains the position that the polyalkylene glycol set forth in column 8, lines 8-12, meets the limitations of the polyalkene glycol of claim 1 when R^5 is a hydrocarbon group containing from 1 to 30 carbon atoms, R^6 is hydrogen, methyl or ethyl, and R^7 is hydrogen. When R^7 is hydrogen, the alkylene group bonded to the terminal hydroxyl group may be either ethylene (R^6 = H), propylene (R^6 = CH_3) or butylene ($R^6 = CH_2CH_3$). Although an ethylene content of not more than 20 mole % is not set forth by Tolfa, the compounds include such a possibility. The examiner is of the position that the claimed refrigerant machine oil composition fails to distinguish over the possible compositions disclosed in Tolfa.

Tazaki discloses a refrigerator oil for use in compression refrigerators using a carbon dioxide refrigerant which comprises an oxygen-containing organic component as the base oil having a kinematic viscosity at 100°C of from 5 to 50 mm^2/s, most preferably from 7 to 20 mm^2/s. See column 13, top. The base oil includes polyoxyalkylene glycols set forth as general formula (I) in column 4, lines 54-56, wherein R^1 may be an alkyl group having from 1 to 10 carbon atoms, R^2 may be an alkylene group having from 2 to 4 carbon atoms, and R^3 may be a hydrogen atom. The examiner maintains the position that Tazaki also meets the limitations of the above rejected claims. Applicants' argue that Tazaki does not disclose or suggest at least a ratio of molecules in which an alkylene group bonded to a terminal hydroxyl group in the polyalkylene glycol is an ethylene group of not more than 20 mol %. The examiner is of the position that Tazaki does teach a polyalkylene glycol wherein R^2 represents an alkylene group having from 2 to 4 carbon atoms; thus compounds containing less than 20% C_2 or ethylene are within the disclosure of Tazaki.

Fahl et al ["Fahl"] disclose polyalkylene glycols as lubricants for carbon dioxide refrigerating machines, heat pumps and related systems such as air conditioning systems. The polyalkylene glycols contain (a) at least 40%, preferably 60%, of the monomer units $-(CH(CH_3)-CH_2-O-)-$ and/or $-(CH_2-CH(CH_3)-O-)-$, and (b) monomer units –(R-O-)- wherein R is a linear or branched saturated alkylene group with 2 to 6 carbon atoms. Fahl teaches that the polyalkylene glycols have hydrogen, alkyl, alkoxy and hydroxy as end groups. Fahl teaches that polyalkylene glycols with only one free hydroxy group is preferred over those with two free hydroxy groups. Fahl teaches that the polyalkylene glycols have a molecular weight from 400 to about 3,000

g/mol. See page 4. The examiner maintains the position that Fahl appears to meet the limitations of the above rejected claims. Applicants argue that Fahl does not disclose or suggest a rate of molecules in which the alkylene group bonded to a terminal hydroxyl group is an ethylene group of not more than 20 mol%. As set forth above, Fahl teaches that between 40-60% of the monomer units are propylene. The remaining 60-40% monomer units are selected from C_2, C_3, C_4, C_5, and C_6 units. Fahl teaches on pages 3-4 that monomer units (b), which are preferably ethylene oxide or butylene oxide groups, are contained in the polymer chain in at least 5%. The examiner is of the position that the possibility that up to 20% of the monomer units may be ethylene is clearly within the scope of the invention of Fahl and meets the limitations of the claims.

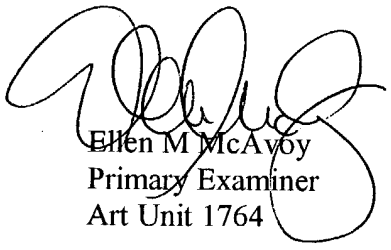
THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ellen M McAvoy whose telephone number is (571) 272-1451. The examiner can normally be reached on M-F (7:30-5:00) with alt. Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on (571) 272-1444. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Ellen M McAvoy
Primary Examiner
Art Unit 1764

EMcAvoy
October 6, 2004